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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,805	01/21/2005	Katja Wosikowski-Buters	2923-686	3802

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EXAMINER	
KISHORE, GOLLAMUDI S	

ART UNIT	PAPER NUMBER
1615	

NOTIFICATION DATE	DELIVERY MODE
07/31/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	10/521,805	WOSIKOWSKI-BUTERS ET AL.	
	Examiner	Art Unit	
	Gollamudi S. Kishore, Ph.D	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 28-53 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 28-53 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 53 provides for the use of the formulation, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 53 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

3. Claims 34, 35 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

'for example' and 'such as' render claims 35 and 37 indefinite. The examiner suggests the deletion of those terms.

There should have been space between phospholipid and selected from.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 28-37, 41-48 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00 04954 (English equivalent US 2003/0013723).

WO 00 teaches the claimed compounds (Examples in English equivalent). WO further suggests that these compounds can be incorporated into the membranes of liposomes and facilitate the targeting of cytotoxic agents such as doxorubicin (0069 of English equivalent). What is lacking in WO is the teaching of the amounts the active compound in the liposomes and whether the liposomes are unilamellar with claimed diameters. WO is also silent with respect to the specific components forming the liposomes, that is, phospholipids. Since the amounts of the active agent depends upon the condition of the patient and the nature of the disease, it would have been obvious to one of ordinary skill in the art to vary the amounts in order to obtain the best possible results. The use of phospholipids as the liposome forming material would have been obvious to one ordinary skill in the art since phospholipids are routinely used for the formation of liposomes.

6. Claims 28-32 and 41-48 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00 04954 (English equivalent US 2003/0013723) in combination with WO 88/09168.

WO 00 as pointed out above teaches the claimed compounds (Examples in English equivalent). WO further suggests that these compounds can be incorporated into the membranes of liposomes and facilitate the targeting of cytotoxic agents such as doxorubicin (0069 of English equivalent). What is lacking in WO is the teaching of the amounts the active compound in the liposomes and whether the liposomes are unilamellar with claimed diameters. WO is also silent with respect to the specific components forming the liposomes, that is, phospholipids. Since the amounts of the active agent depends upon the condition of the patient and the nature of the disease, it would have been obvious to one of ordinary skill in the art to vary the amounts in order to obtain the best possible results. The use of phospholipids as the liposome forming material would have been obvious to one ordinary skill in the art since phospholipids are routinely used for the formation of liposomes.

WO 88 teaches liposomal formulations containing doxorubicin for the treatment of tumors. The liposomes contain lecithin, phosphatidylglycerol, cholesterol and cryoprotectant. WO teaches that the liposomes can be dehydrated and reconstituted before use (Examples 1 and 2).

One of ordinary skill in the art would be motivated to use the liposomes of WO 82 containing lecithin, phosphatidylglycerol, cholesterol and a cryoprotectant in the generic teachings of WO 00 with a reasonable expectation of success since WO 82 teaches that the liposomes made from those components can be used for tumor treatment purposes.

7. Claims 28-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00 04954 (English equivalent US 2003/0013723) in combination with Barenholz (6,156,337).

WO 00 as pointed out above teaches the claimed compounds (Examples in English equivalent). WO further suggests that these compounds can be incorporated into the membranes of liposomes and facilitate the
targeting of cytotoxic agents such as doxorubicin (0069 of English equivalent). What is lacking in WO is the teaching of the amounts the active compound in the liposomes and whether the liposomes are unilamellar with claimed diameters. WO is also silent with respect to the specific components forming the liposomes, that is, phospholipids.

Barenholz teaches liposomal formulations containing DMPG, phosphatidylcholine and cholesterol for the delivery of active substances and the advantages of using these phospholipids. The liposomal formulations contain a cryoprotectant and are dehydrated (col. 7, lines 15-28; col. 9, lines 19-57).

It would have been obvious to use the phospholipids taught by Barenholz in the generic liposomes taught by WO 00 because of the advantages taught by Barenholz.

8. Claims 28, 31-36, 41-48 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henkin et al (6,716, 963).

Henkin et al teach guanidine and amidino derivatives of phenylalanine and suggest that these compounds be delivered using liposomes as carriers. Henkin et al further teach the administration of these compounds with cytotoxic agents such as doxorubicin (Table 1, columns 11-28, col. 33, lines 12-55).

What is lacking in Henkin et al is the teaching of the amounts the active compound in the liposomes and whether the liposomes are unilamellar with claimed diameters. Henkin et al is also silent with respect to the specific components forming the liposomes, that is, specific phospholipids. Since the amounts of the active agent depends upon the condition of the patient and the nature of the disease, it would have been obvious to one of ordinary skill in the art to vary the amounts in order to obtain the best possible results. The use of claimed phospholipids as the liposome forming material would have been obvious to one ordinary skill in the art since phospholipids are routinely used for the formation of liposomes. The intended use has no significance in composition claims.

9. Claims 33-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henkin et al (6,716, 963) in combination with Barenholz (6,156,337).

Henkin et al teach guanidine and amidino derivatives of phenylalanine and suggest that these compounds be delivered using liposomes as carriers. Henkin et al further teach the administration of these compounds with cytotoxic agents such as doxorubicin (Table 1, columns 11-28, col. 33, lines 12-55).

What is lacking in Henkin et al is the teaching of the amounts the active compound in the liposomes and whether the liposomes are unilamellar with claimed diameters. Henkin et al is also silent with respect to the specific components forming the liposomes, that is, specific phospholipids and the use of a cryoprotectant. Barenholz teaches liposomal formulations containing DMPG, phosphatidylcholine and cholesterol for the delivery of active substances and the advantages of using these

phospholipids. The liposomal formulations contain a cryoprotectant and are dehydrated (col. 7, lines 15-28; col. 9, lines 19-57).

It would have been obvious to use the phospholipids taught by Barenholz in the generic liposomes taught by WO 00 because of the advantages taught by Barenholz. The use of cryoprotectant would have been obvious to one of ordinary skill in the art since it would protect the liposomes during dehydration.

Schmidt (5,817334) is cited of interest.

Applicant must submit the references cited on 1449.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gollamudi S. Kishore, Ph.D whose telephone number is (571) 272-0598. The examiner can normally be reached on 6:30 AM- 4 PM, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Woodward Michael can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gollamudi S Kishore, Ph.D
Primary Examiner
Art Unit 1615

GSK